

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:	§	
	§	CUSTOMER NO. 29855
David Banks	§	
Kumar Malavalli	§	
Paul Ramsay	§	
Kha Sin Teow	§	
Jieming Zhu	§	
	§	Docket No. 112-0146US
Serial No. UNKNOWN	§	
	§	Art Unit 2666
Filed: OF EVEN DATE	§	
	§	Examiner: Kevin C. Harper
For: METHOD AND SYSTEM FOR	§	
CREATING AND IMPLEMENTING	§	
ZONES WITHIN A FIBRE	§	
CHANNEL SYSTEM	§	

PRELIMINARY REMARKS

Commissioner of Patents
Alexandria, VA 22313

Dear Sir:

In an Office Action dated December 5, 2003 in the parent case, claims 1-3, 11, 15-23, 26-28, 32-33, 39-43 and 46 were rejected under § 102 and § 103. Applicants provide these preliminary remarks to address those rejections.

Amendments to the Claims are reflected in the listing of claims that begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

CLAIMS

1. (Original) In a system comprising a first fabric and a plurality of devices coupled to the first fabric by Fibre Channel connections, the devices otherwise being able to communicate through the first fabric, a method for logically organizing the devices comprising:

accessing a definition of a first configuration including at least one zone, each zone including at least one device as a member of the zone; and

responsive to the definition of the first configuration, restricting communications between the devices coupled to the first fabric.

2. (Original) The method of claim 1 wherein the first configuration is an effective one of a plurality of configurations.

3. (Original) The method of claim 1 further comprising:
storing the definition of the first configuration in a non-volatile medium; and
reinstating the first configuration after a loss of power to the first fabric.

4. (Original) The method of claim 1 wherein:
in the definition of the first configuration, at least one zone is characterized by a type of communication; and

the step of restricting communications includes restricting communications between devices which are member of said zone to said type of communication.

5. (Original) The method of claim 1 wherein, in the definition of the first configuration, at least one device is identified by a name which is independent of the device's location on the fabric.

6. (Original) The method of claim 5 wherein the name includes a Worldwide Port Name.

7. (Original) The method of claim 5 wherein the name includes a Worldwide Node Name.

8. (Original) The method of claim 1 wherein, in the definition of the first configuration, at least one device is identified by an Arbitrated Loop Physical Address.

9. (Original) The method of claim 1 wherein:
the step of accessing the definition of the first configuration includes:

storing the definition of the first configuration in the first fabric, and
the first fabric accessing the definition; and

the step of restricting communications between the devices includes, responsive to the definition of the first configuration, the first fabric restricting communications between the devices coupled to the first fabric.

10. (Original) The method of claim 1 wherein the first fabric comprises one or more interconnected fabric elements to which the devices are coupled, and wherein:

the step of accessing the definition of the first configuration includes:

storing the definition of the first configuration in each fabric element, and
each fabric element accessing the definition; and

the step of restricting communications between the devices includes, responsive to the definition of the first configuration, each fabric element restricting communications for the devices coupled to said fabric element.

11. (Original) The method of claim 10 further including:

responsive to a coupling of an additional fabric element to the first fabric,
determining whether any definition for any configuration is stored in said fabric element;
and

responsive to no definitions being stored in the additional fabric element, storing the definition of the first configuration in the additional fabric element.

12. (Original) The method of claim 1 wherein the first fabric comprises one or more interconnected fabric elements to which the devices are coupled, the method further comprising:

responsive to a coupling of an additional fabric element to the first fabric,
modifying the definition of the first configuration to account for the additional fabric element.

13. (Original) The method of claim 1 further comprising:

responsive to a merging of the first fabric with a second fabric, modifying the definition of the first configuration to account for the second fabric.

14. (Original) The method of claim 1 further comprising:

compiling the definition of the first configuration; and

wherein the step of restricting communications between the devices coupled to the first fabric is responsive to the compiled definition of the first configuration.

15. (Original) A fabric element for use in a system comprising a first fabric and a plurality of devices coupled to the first fabric by Fibre Channel connections, the devices otherwise being able to communicate through the first fabric, the fabric element comprising:

a plurality of ports, each port adapted to be coupled to a device by a Fibre Channel connection;

a storage medium for storing a definition of a first configuration including at least one zone, each zone including at least one device as a member of the zone; and

a logic device coupled to the plurality of ports and to the storage medium, for, responsive to the definition of the first configuration, restricting communications for devices coupled to the plurality of ports.

16. (Original) The fabric element of claim 15 wherein the storage medium includes a nonvolatile medium.

17. (Original) The fabric element of claim 15 further comprising:
a compiler coupled to the storage medium and to the logic device for compiling the definition of the first configuration for use by the logic device.

18. (Original) A computer readable medium containing software for logically organizing a plurality of devices coupled to a first fabric by Fibre Channel connections, the devices otherwise being able to communicate through the first fabric the software for instructing a processor to perform the steps of:

accessing a definition of a first configuration including at least one zone, each zone including at least one device as a member of the zone; and

responsive to the definition of the first configuration, restricting communications between the devices coupled to the first fabric.

19. (Original) The computer readable medium of claim 18 wherein:
in the definition of the first configuration, at least one zone is characterized by a type of communication; and

the step of restricting communications includes restricting communications between devices which are member of said zone to said type of communication.

20. (Original) The computer readable medium of claim 18 wherein, in the definition of the first configuration, at least one device is identified by a name which is independent of the device's location on the fabric.

21. (Original) The computer readable medium of claim 18 wherein, in the definition of the first configuration, at least one device is identified by an Arbitrated Loop Physical Address.

22. (Original) The computer readable medium of claim 18 wherein the software is further for instructing the processor to perform the step of:
storing the definition of the first configuration.

23. (Original) The computer readable medium of claim 18 wherein the software is further for instructing the processor to perform the step of:
responsive to a merging of the first fabric with a second fabric, modifying the definition of the first configuration to account for the second fabric.

24. (Original) The computer readable medium of claim 18 wherein the software is further for instructing the processor to perform the step of:
compiling the definition of the first configuration; and
wherein the step of restricting communications between the devices coupled to the first fabric is responsive to the compiled definition of the first configuration.

REMARKS

Sections 102 and 103 Rejections

In an Office Action dated December 5, 2003 in the parent case, claims 1-3, 11, 15-23, 26-28, 32, 33, 39-43 and 46 were rejected under § 102(e) over Berman and § 103 over Berman and Brunson. Applicants provide these preliminary remarks to address those rejections.

Claim Correspondence

Appendix A is a chart indicating the correspondence between the claims in the current case and in the prior case. For ease of understanding these remarks, the current case claim number will be utilized, followed by the prior case claim number in parentheses where different.

Claims 1, 15(27) and 18(33)

In the Office Action in the prior case, claims 1, 15(27) and 18(33) were rejected under § 102(e) over Berman. This rejection is submitted as having been improper.

All three claims have had clarifying language included in their preambles indicating “the devices otherwise being able to communicate through the first fabric.” Applicants submit this language was inherent in the prior claims as the devices would have to be otherwise able to communicate to they have their communication restricted as required in the bodies of the claims. However, it is believed that providing this clause in the preamble makes this inherent point clearer.

With this background, it is submitted that the rejection over Berman was improper. Berman provides a mechanism to allow devices which could not otherwise communicate, such as the private loop devices on physically different loops, to be able to communicate. Quoting from paragraph 8 of Berman: “Private loop devices use only the lower eight bits of the ALPA and can only communicate within the local loop.” Quoting from paragraph 15 of Berman: “an interconnection system is provided for connecting a plurality of physically separate Fibre Channel Arbitrated Loops, the loops either containing, or being adapted to contain, one or more private loop devices.”

Therefore Berman only provides the basic system, namely Fibre Channel devices that are able to communicate. It does not go the next step, as defined by the claim elements, of using a zone configuration definition to restrict communication between the

devices. Berman restricts the devices to specific addresses, but this is specifically to allow them to communicate, not to restrict any otherwise allowed communication. Thus, the rejection over Berman was improper and should not be applied in the present case.

Claims 5(15) and 20(40)

Claims 5(15) and 20(40) require at least one device identified by a name which is independent of the device's location on the fabric. The Office Action referenced paragraph 21 of Berman. In fact, the cited paragraph teaches that the device address, which is not its name, is based on its location. Quoting Berman: "Generally the steps in the preferred method comprise, first, dividing the ALPAs into nonoverlapping sets, second, assigning each set to a separate physical Arbitrated Loop, and thereafter, during loop initialization, forcing the attached private loop devices to choose from the assigned set." This is shown more in paragraphs 183 to 186. Thus Berman specifically does base address on location.

Berman further notes in paragraph 97 that the WWN is unique worldwide. This differs from addresses, which are dependent on the connected locations, as discussed above. But Berman does not use the WWN even in its loop connection mechanism, much less in a configuration to restrict communications.

Thus the rejection of claims 5(15) and 20(40) was improper.

Claims 11(21)

Claim 11(21) requires storing the first configuration definition in an added fabric element (not node, but fabric element) when the added fabric element has no stored definitions. The Office Action referenced paragraph 175 of Berman as showing this. In fact, paragraph 175 of Berman indicates the need to LIP or reinitialize the loop if a device is added. This is not storing the existing first configuration definition but instead is developing an entirely new definition. Thus Berman actually teaches away from claim 11(21).

Claims 13(23) and 23(43)

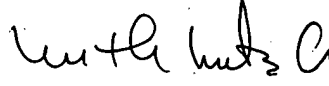
Claims 13(23) and 23(43) require modifying the first configuration definition when two fabrics merge. The Office Action cited paragraph 154, 156 and 161-162 of Berman. It is submitted that paragraphs 154 and 156 are not relevant as they relate to hubs. Paragraphs 161-162 merely relate to defining how to setup the addresses of the

devices in Berman. This does not indicate or suggest modifying configuration definitions when fabrics merge. Thus the rejection was improper.

Conclusion

Applicants submit that when all of the claim terms are properly considered, the claims are allowable over the previously cited art.

Respectfully submitted,



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Appendix A

Claim Correspondence

Parent Case	Current Case
1	1
2	2
3	3
11	4
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